

Patent Claims

1. A seatbelt lock having a preventive tensioning device which moves the seatbelt lock from an operating position into a lowered safety position with respect to the operating position and which comprises an energy accumulator and a drive unit, in that the seatbelt lock (1) is maintained preloaded in the operating position by means of the energy accumulator (4), the drive unit (6) transferring the seatbelt lock (1) from the safety position back into the operating position, characterized in that the drive unit (6) of the tensioning device (2) moves the seatbelt lock (1) from its operating position into a raised comfort position with respect to the operating position.

2. The seatbelt lock as claimed in claim 1, characterized in that the energy accumulator (4) is a compression spring (7) which is connected to the seatbelt lock (1) via a draw-in cable (3).

3. The seatbelt lock as claimed in claim 1, characterized in that a rack (5) is fastened to the seatbelt lock (1) and interacts with a corresponding driven gear (13) of the drive unit (6).

4. The seatbelt lock as claimed in either of claims 1 and 3, characterized in that the drive unit (6) is an electric motor which drives an electric motor-operated seat adjuster.

5. The seatbelt lock as claimed in either of claims 1 and 3, characterized in that the drive unit (6) is a

hydraulic pump.

6. A deflection unit for a seatbelt lock having a preventive tensioning device, characterized in that a shaft (14) is provided with a cam track (14a) which is in engagement with a catch (17) and a ratchet gear (13) is provided with a grooved track (13a) which is in engagement with the catch (17), the ratchet gear (13) being able to rotate on the shaft between two operating positions.

7. The deflection unit as claimed in claim 6, characterized in that the catch (17) is not in engagement with the grooved track (13a) during a preventive tensioning operation.

8. The deflection unit as claimed in claim 6, characterized in that the catch (17) is not in engagement with the cam track (14a) during a reversing operation.

9. The deflection unit as claimed in one of claims 6 to 8, characterized in that, when there are high tensile forces on the seatbelt lock (1), the ratchet gear (13) can be rotated as far as stops (28) on the shaft (14).

10. A synchronizing unit for a seatbelt lock having a preventive tensioning device for controlling tensioning, reversing and locking operations, characterized in that locking blocks (21, 22) are mounted so that they can be rotated relative to one another within a housing (8) for a spring (7).

11. The synchronizing unit as claimed in claim 10, characterized in that the end faces (32, 33) of the locking blocks (21, 22) are designed as tooth flanks.

12. A synchronizing unit for a seatbelt lock having a preventive tensioning device for controlling tensioning, reversing and locking operations, characterized in that spiral hubs (34, 35) are arranged on a shaft (14), it being possible by displacing the spiral hubs (34, 35) toward one another to transmit a torque to a ratchet gear (13) which drives the seatbelt lock (1), grooves (39) of the pin disk (37) being in engagement with openings (40) of the perforated disk (38).

13. The synchronizing unit as claimed in claim 12, characterized in that a spring unit (36) preloads the spiral hubs (34, 35) relative to one another.